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AMSAT NEWS SERVICE
ANS-194

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see:
http://www.amsat.org/mailman/listinfo/ans

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SB SAT @ AMSAT $ANS-194.01
ANS-194 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 194.01
From AMSAT HQ KENSINGTON, MD.
DATE July 12, 2020
To All RADIO AMATEURS
BID: $ANS-194.01

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https://tinyurl.com/ANS-194-Letter

[ANS thanks the AMSAT Office for the above information]

Update on HO-107 (HuskySat-1)

AMSAT Vice President - Engineering Jerry Buxton, N0JY, posted the following update on HO-107 (HuskySat-1) on the AMSAT-BB:

While it is disappointing that the transponder did not see a longer period of use following the science missions, the overall HuskySat-1/HO-107 project and mission were quite beneficial for our partner and for AMSAT. The HuskySat-1 team were able to command their satellite and experiments and receive the telemetry they sought, and AMSAT was able to work through the extensive process of making a new design for a "black box" radio module that can be integrated into a non-AMSAT spacecraft and fly in the space environment.

The LTM (Linear Transponder Module) on HO-107 worked for over three months after HuskySat-1 came alive following its deployment.
The failure of the LTM came during or just after a period of full sun where LTM temperatures reached over 80 degrees Celsius.

While licensed and operated as an amateur radio satellite by AMSAT during the transponder use, there are some facts that set HO-107 apart from our Fox-1 CubeSats and other AMSAT satellites.

1. It's not our satellite. We have no control and may not have any insight into how a partner actually uses the LTM. While we see the LTM temperatures and many of the other typical data fields that we downlink to FoxTelem regarding LTM health, data such as temperature of the host environment as well as other specific information like power and the state of the other systems in a host satellite may or may not be available to us. Whether LTM is operated within design limits is entirely up to the host.

The University of Washington HuskySat Labs team was very cooperative with us on this mission, however there are things regarding their mission that we do not know because they are processing and studying their data for use in their thesis and classes and preparing it for release in a specific way typical of such an institution today. AMSAT is generally more forthcoming with information about our missions but what we can and have said about this mission is determined by UW.
That is really no different to certain aspects of our own missions.
Most members are likely familiar with the vague wording I provide for some of our launch timelines and that is the result of the same thing, in the owner of the launch vehicle or LSP/APIC determining what we can say to the public and when.

2. HO-107 was the first ever use of a new product, the AMSAT LTM.
The LTM idea was first put forth at the AMSAT leadership strategic planning meeting in 2017 and is now coming into availability for other non-AMSAT CubeSats to fly amateur radio on their mission.

HO-107 is the pilot production of LTM and was developed in partnership with UW HuskySat-1. It was the first CubeSat radio module designed and built by AMSAT for use in other host CubeSats, and UW was key in working with us through the design and processes needed to provide such a module. They did not buy it as, nor did we give it to them as an "off the shelf" product as we plan to for future LTM production.
LTM was developed from the Fox-1E linear transponder design, and

provided in a partnership with UW that started in November 2014 when we made an agreement with University of Washington to fly an amateur radio on their CubeSat mission. Overall, the HuskySat-1 team were quite happy with the telemetry and command performance even with the LTM anomalies showing up toward the end of their experiments. In the process of getting HuskySat-1 to orbit several students became interested in amateur radio, and we have already had preliminary discussions of future joint mission plans.

The ability to provide more LTM to new and future partners will increase the number of orbiting satellites carrying amateur radio, at a low cost to AMSAT and the partner, keeping amateur radio in space even as we develop newer and more capable satellites. There is no doubt that HO-107 was a success in many ways beyond the operational life of the transponder.

As usual, the AMSAT Engineering team of volunteers deserve the praise for putting yet another amateur radio in space be it in our own satellite, or in a partner satellite!

[ANS thanks Jerry Buxton, N0JY, AMSAT Vice President - Engineering, for the above information]

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available (see the callsign W5W or W5B at the QRZ.com web site for QSL information).

Operations will be held on:

Voice 10, 15, 20, 40 and 80 meters
Digital FT8 on 20, 40 and 80 meters
CW on 20, 40 meters
Satellite

Listen for the FCC assigned callsigns: W5W or W5B

Shortwave Listeners (SWL) are encouraged to participate.

For those without amateur radio privileges to transmit or listen in, please join us Saturday July 25 at 1pm CST on Facebook Live, look for Buffalo Soldiers Program - Texas Parks and Wildlife, for participation and a chance at a special QSL Card and Commemorative Certificate.

For additional information about the Buffalo Soldiers legacy and an excellent video history about the Buffalo Soldiers with commentary from Judge Joe Green please visit www.qrz.com and enter W5W or W5B into the search box.

[ANS thanks Rudy Hardy, W5HRH, for the above information]

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AMSAT, along with our ARISS partners, is developing an amateur radio package, including two-way communication capability, to be carried on-board Gateway in lunar orbit.

Support AMSAT's projects today at https://www.amsat.org/donate/

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. President's Club donations may be made at https://tinyurl.com/ANS-PresClub.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status.

Join AMSAT today at https://launch.amsat.org/

73 and remember to help Keep Amateur Radio in Space,

This week's ANS Editor,

Paul Stoetzer, N8HM
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